

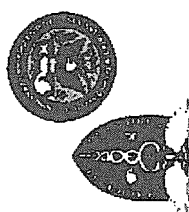
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Parsonage-Turner Syndrome Following Continuous Peripheral Nerve Blockade

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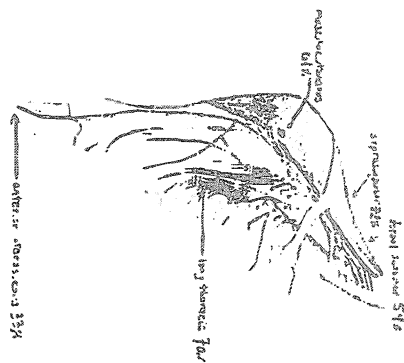
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Introduction

Parsonage-Turner Syndrome (PTS) has rarely been reported to occur following surgery. We present a case of PTS following use of a continuous peripheral perineural catheter placed for the purpose of post-operative analgesia.

Location: United States Air Force Military Treatment Facility.



The brachial plexus with regions that are commonly affected along with the percentage of PTS patients that have involvement of each nerve.

Methods

Case: Following uncomplicated preoperative placement of a continuous interscalene perineural catheter for postoperative analgesia after shoulder arthroscopy, a 39 year-old man experienced neurologic disturbances consistent with PTS. The patient demonstrated lancinating pain and weakness to attempted flexion of the interphalangeal joint of his thumb and to the distal interphalangeal joint of his first digit; his exam was consistent with an anterior interosseous nerve lesion. He also endorsed numbness and allodynia to the lateral arm and forearm.

Sensory nerve action potential of the lateral antebrachial cutaneous nerve (LABC) sensory response was absent; needle electromyography showed abnormal spontaneous activity in the deltoid and flexor pollicis longus (FPL) muscles. There were absent volitional motor unit potentials in the FPL. All other nerve studies were normal bilaterally. The patient demonstrated multifocal pathology.

Results

The patient underwent aggressive physical and occupational therapy. Pregabalin effectively managed pain. Two months post-surgery, the patient regained LABC nerve sensation. By four months, his strength had fully returned, but he still endorsed allodynia to the lateral arm.

Conclusion

PTS, acute brachial neuropathy or neuralgic amyotrophy, is a peripheral nerve disorder of unknown cause, although risk factors have been identified. The condition manifests as a rare set of symptoms possibly resulting from autoimmune inflammation. This case highlights a unique presentation of PTS after continuous peripheral nerve blockade.

Criteria for the diagnosis of classic phenotype neuralgic amyotrophy

- Subacute or acute onset
- Initial pain equal or greater than 7/10 for days to weeks
- Multifactorial distribution focusing on the upper limb, long thoracic nerve and suprascapular nerve
- Monophasic course with slow recovery or no recovery over months
- No other obvious explanation for neurologic deficit

References

1. Neuralgic amyotrophy: An update on diagnosis, pathophysiology, and treatment. Van Eijk JJ, Groothuis JT, Van Allen N. Muscle Nerve. 2016;53(3):337-50.
2. Incidence of Neuralgic Amyotrophy (Parsonage Turner Syndrome) in a Primary Care Setting - A Prospective Cohort Study. van Allen N, van Eijk JJ, Ennik T, Flynn SO, Nobacht IEG, Groothuis JT, Plien S, van de Laar SA. PLoS One 2015 (<https://doi.org/10.1371/journal.pone.0128336>)
3. Neuralgic Amyotrophy Attributed Incorrectly to Block-Related Injury: Understanding Errors in Clinical Reasoning. Neal JM, Porter SS, Wilson BR. Reg Anesth & Pain Med 2017;42: 645-648.
4. Sensory nerve conduction studies in neuralgic amyotrophy. van Allen N, Huisman WJ, Overeem S, van Engelen BG, Zwarts MJ. Am J Phys Med Rehabil 2009;88: 941-946.
5. How to know it when you see it: diagnosing neuralgic amyotrophy (Parsonage-Turner Syndrome). Norbury J et. al. <http://practicalneurology.com/2015>.
6. Challenging pain syndromes: Parsonage-Turner syndrome. Smith CC, Bevelacqua AC. Phys Med Rehabil Clin N Am. 2014;25(2):265-77.

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